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Figure 1A

SEQ ID NO:					
6	mouse_E3αI	MASEMEPEVQ	AI D-RSLLC	SAAEI AGRWL	QATDLNREVY QHLAHCVPKI 49
4	human_E3αI	MASELEPEVQ	AI D-RSLLC	SAAEI AGKWL	QATDLTREYV QHLAHYVPKI 49
15	mouse_E3αI	MADEEMDGAE	RMDVSPEPPL	APQRPASWMD	QQVDFYTAFL HHLAQLVPEI 50
2	human_E3αI	MADEEAGGTE	RMEISAE LPQ	TPQRLASWMD	QQVDFYTAFL HHLAQLVPEI 50
	Consensus	MA.E.....	D...L...	.....A..W.	Q..D.....HLA..VP.I 50
6	mouse_E3αI	YCRGPNPFPQ	KEDTLAQHI L	LGPMEWICA	EDPALGFPKL EQANKPSHLC 99
4	human_E3αI	YCRGPNPFPQ	KEDMLAQHVL	LGPMEWLCG	EDPAFGFPKL EQANKPSHLC 99
15	mouse_E3αI	YFAEMDPDL	E KQEE SVQMSI	LTPLEWFLG	EDPDI CLEKL KHSG-AFQLC 99
2	human_E3αI	YFAEMDPDL	E KQEE SVQMSI	FTPLEWFLG	EDPDI CLEKL KHSG-AFQLC 99
	Consensus	Y.....P...	K.....Q...	L.P.EWY.L.G	EDP.....KL .....LC 100
6	mouse_E3αII	GRVFKVGEPT	YSCRDCAVDP	TCVLCMECFL	GSI HRDHRYR MTTSGGGGFC 149
4	human_E3αII	GRVFKVGEPT	YSCRDCAVDP	TCVLCMECFL	GSI HRDHRYR MTTSGGGGFC 149
15	mouse_E3αI	GKVFKSGETT	YSCRDCAI DP	TCVLCMDCFQ	SSVHKNHRYK MHTSTGGGFC 149
2	human_E3αI	GRVFKSGETT	YSCRDCAI DP	TCVLCMDCFQ	DSVHKNHRYK MHTSTGGGFC 149
	Consensus	GRVFK. GE. T	YSCRDCA. DP	TCVLCM CF.	. S. H. . HRY. M TS. GGGFC 150
6	mouse_E3αII	DCGDTEAWKE	GPYCQKHKL S	SSEVVEEEDP	LVHLSIEDVI A RTYNI FAI MF 199
4	human_E3αII	DCGDTEAWKE	GPYCQKHEL N	TSEIEEEEDP	LVHLSIEDVI A RTYNI FAI TF 199
15	mouse_E3αI	DCGDTEAWKT	GPFCVDHEPG	RAGTTKESLH	- CPLNEEVI A QARRI FPSVI 198
2	human_E3αI	DCGDTEAWKT	GPFCVNHEPG	RAGTI KENSR	- CPLNEEVI V QARKI FPSVI 198
	Consensus	DCGDTEAWK.	GP.C...HE...	.....E...	...L.E.VIA ....IF.... 200

Figure 1B

6	mouse_E3αII	RYAVDILTWE	KESELPEDLE	VAEKSDTYYC	MLFNDEVHTY	EQVI YTLQKA	249
4	human_E3αII	RYAVEILTWE	KESELPADLE	MWEKSDTYYC	MLFNDEVHTY	EQVI YTLQKA	249
15	mouse_E3αI	KYIVEMTIWE	EEKELPPELQ	I REKNERYYC	VLFNDEHHSY	DHVI YSLQRA	248
2	human_E3αI	KYVVEMTIWE	EEKELPPELQ	I REKNERYYC	VLFNDEHHSY	DHVI YSLQRA	248
	Consensus	.Y.VE...WE	.E.ELP..L.	..EK..YYC	.LFNDE.H.Y	.VI.Y.LQ.A	250
6	mouse_E3αII	VNCTQKEAIG	FATTVDRDGR	RPVRYGDFQY	CDQAKTVI VR	NTSRQTK- PL	298
4	human_E3αII	VNCTQKEAIG	FATTVDRDGR	RSVRYGDFQY	CEQAKSVI VR	NTSRQTK- PL	298
15	mouse_E3αI	LDCELAEACL	HTTAIDKEGR	RAVKAGVYAT	CQEAKEDI KS	HSENVSQHPL	298
2	human_E3αI	LDCELAEACL	HTTAIDKEGR	RAVKAGAYAA	CQEAKEDI KS	HSENVSQHPL	298
	Consensus	..C...EA..	..T..D..GR	R.V..G....	C..AK..I..	.....PL	300
6	mouse_E3αII	KVQVMHSSVA	AHQNFGLKAL	SWLGSVI GYS	DGLRRI LCQV	GLQEGPDGEN	348
4	human_E3αII	KVQVMHSSIV	AHQNFGLKLL	SWLGSII GYS	DGLRRI LCQV	GLQEGPDGEN	348
15	mouse_E3αI	HVEVLHVVMM	AHQKFALRLG	SWWNKI MSYS	SDFRQI FCQA	CLVEEPPGSEN	348
2	human_E3αI	HVEVLHSEIM	AHQKFALRLG	SWWNKI MSYS	SDFRQI FCQA	CLREEPDSEN	348
	Consensus	.V.V.HS...	AHQ.F.L.L.	SW..I..YS	...R.I.CQ.	.L.E.PD.EN	350

Figure 1C

6	mouse_E3αII	SSLVDRLMLN	DSKLWKGARS	VYHQLFMSSL	LMDLKYKKLF	ALRFAKNYRQ	398
4	human_E3αII	SSLVDRLMLS	DSKLWKGARS	VYHQLFMSSL	LMDLKYKKLF	AVRFAKNYQQ	398
15	mouse_E3αI	PCLISRLMLW	DAKLYKGARK	ILHELIFSSF	FMEMEYKKLF	AMEFVKYKQ	398
2	human_E3αI	PCLISRLMLW	DAKLYKGARK	ILHELIFSSF	FMEMEYKKLF	AMEFVKYKQ	398
	Consensus	. . L . . RLML .	D . KL . KGAR .	. . H . L . . SS .	. M . . YKKLF	A . . F . K . Y . Q	400
6	mouse_E3αII	LQRDFMEDDH	ERAVSVTALS	VQFFTAPTLA	RMLTEENLM	TVI I KAFMDH	448
4	human_E3αII	LQRDFMEDDH	ERAVSVTALS	VQFFTAPTLA	RMLTEENLM	SI I I KTFMDH	448
15	mouse_E3αI	LQKEYISDDH	ERSISITALS	VQMLTVPTLA	RHLIEEQNVI	SVI TETLLEV	448
2	human_E3αI	LQKEYISDDH	DRSISITALS	VQMFTVPTLA	RHLIEEQNVI	SVI TETLLEV	448
	Consensus	LQ DDH ER . . S . TALS	VQ . FT . PTLA	R . LI . E . N . .	SVI . . T . .		450

Figure 1D

SEQ ID NO:				
6	mouse_E3αII	L KHRDAQGRF	QFERYTALQA	FKFRRVQS LI
				LDLKYVLI SK
				PTEWSD ELRQ
4	human_E3αII	L RHRDAQGRF	QFERYTALQA	FKFRRVQS LI
				LDLKYVLI SK
				PTEWSD ELRQ
15	mouse_E3αI	L PEYLD RNN-	KFN-FQYSQ	DKLGRVYAVI
				CDLKYI LI SK
				PVI WTERLRA
2	human_E3αI	L PEYLD RNN-	KFN-FQYSQ	DKLGRVYAVI
				CDLKYI LI SK
				PTI WTERLRM
	Consensus	L . . . . .	. F . . . . .	. K . . RV . . . I
				. DLKY. LI SK
				PT. W. . . LR.
				500
6	mouse_E3αII	KFLQG FDAFL	ELLKCMQGM D	PI TRQVGQHI
				EMEPEWEAAF
				TLQMKLTHVI
4	human_E3αII	KFLEG FDAFL	ELLKCMQGM D	PI TRQVGQHI
				EMEPEWEAAF
				TLQMKLTHVI
15	mouse_E3αI	QFLEGFRSFL	KILTCMQGME	EI RRQVGQHI
				EVDPDWEAAI
				AI QMQLKNI L
2	human_E3αI	QFLEGFRSFL	KILTCMQGME	EI RRQVGQHI
				EVDPDWEAAI
				AI QMQLKNI L
	Consensus	. FLEGF. . FL	. . L. CMQGM	. I. RQVGQHI
				E. . P. WEAA.
				. . QM L. . . .
				550
6	mouse_E3αII	SM/QDWCALD	EKVLI EAYKK	CLAVLTQCHG
				GFTDGEQPI T
				LSI CGHSVET
4	human_E3αII	SM/QDWCASD	EKVLI EAYKK	CLAVLMQCHG
				GYTDGEQPI T
				LSI CGHSVET
15	mouse_E3αI	LMFQEWACD	EDLLLVAYKE	CHKAVMRCST
				NFMSTKT V-
				VQLCGHSLET
2	human_E3αI	LMFQEWACD	EELLVAYKE	CHKAVMRCST
				SFISSSKT V-
				VQSCGHSLET
	Consensus	. M Q. WCA. D	E. . L. . AYK.	C. M C. . .
				. F.
				. . . CGHS. ET
				600

Figure 1E

6	mouse_E3αII	I RYCVSQEKV SIHLPI SRL AGLHVLLSKS EVAYKFPELL PLSELSPPML	648
4	human_E3αII	I YCVSQEKV SIHLPV SRL AGLHVLLSKS EVAYKFPELL PLSELSPPML	648
15	mouse_E3αI	KSYKVSEDLV SIHLPLSRTL AGLHVRLSRL GAI SRLHEFV PFDSFQVEVL	645
2	human_E3αI	KSYRVSEDLV SIHLPLSRTL AGLHVRLSRL GAVSRLHEFV SFEDFQVEVL	645
	Consensus	. . Y. VS. . . V SIHLP. SR. L AGLHV. LS. E. . P. L	650
6	mouse_E3αII	IEHPLRCLVL CAQVHAGMMR RNGFSLVNQI YYYHNVKCR E MF DKDI VML	698
4	human_E3αII	IEHPLRCLVL CAQVHAGMMR RNGFSLVNQI YYYHNVKCR E MF DKDV VML	698
15	mouse_E3αI	VEYPLRCLVL VAQVVAEMMR RNGLSLI SQV FYYQDVKCRE E MY DKDI I ML	695
2	human_E3αI	VEYPLRCLVL VAQVVAEMMR RNGLSLI SQV FYYQDVKCRE E MY DKDI I ML	695
	Consensus	. E. PLRCLVL . AQV. A. MMR RNG. SL. . Q. . YY. . VKCR. EM DKDI . ML	700
6	mouse_E3αII	QTGVSMMDPN HFLM M LSRF ELYQLFSTPD YGKRFSSEVT HKDVVQQNNT	748
4	human_E3αII	QTGVSMMDPN HFLM M LSRF ELYQI FSTPD YGKRFSSEIT HKDVVQQNNT	748
15	mouse_E3αI	QI GASI MDPN KFLLLVLQRY EL-----TDA FNKTI ST--K QODLI KQYNT	738
2	human_E3αI	QI GASL MDPN KFLLLVLQRY EL-----AEA FNKTI ST--K QODLI KQYNT	738
	Consensus	Q. G. S. MDPN . FL. . . L. R. EL. T. K. S. D. Q. NT	750

Figure 1F

6	mouse_E3αII	LI E E M L Y L I I	ML V G E R F N P G	V G Q V A A T D E I	K R E I I H Q L S I	K P M A H S E L V K	798
4	human_E3αII	LI E E M L Y L I I	ML V G E R F S P G	V G Q V N A T D E I	K R E I I H Q L S I	K P M A H S E L V K	798
15	mouse_E3αI	LI E E M L Q V L I	Y I V G E R Y V P G	V G N V T R E E V I	M R E I T H L L C I	E P M P H S A I A R	788
2	human_E3αI	LI E E M L Q V L I	Y I V G E R Y V P G	V G N V T K E E V T	M R E I I H L L C I	E P M P H S A I A K	788
	Consensus	LI E E M . . . I	. . V G E R . . P G	V G . V I	. R E I I H . L . I	. P M H S . . . K	800
6	mouse_E3αII	SL P E D E N K E T	G M E S V I E S V A	H F K K P G L T G R	G M Y E L K P E C A	K E F N L Y F Y H F	848
4	human_E3αII	SL P E D E N K E T	G M E S V I E A V A	H F K K P G L T G R	G M Y E L K P E C A	K E F N L Y F Y H F	848
15	mouse_E3αI	N L P E N E N N E T	G L E N V I N K V A	T F K K P G V S G H	G V Y E L K D E S L	K D F N M Y F Y H Y	838
2	human_E3αI	N L P E N E N N E T	G L E N V I N K V A	T F K K P G V S G H	G V Y E L K D E S L	K D F N M Y F Y H Y	838
	Consensus	. L P E . E N . E T	G . E . V I . . V A	. F K K P G . . G .	G . Y E L K . E . .	K . F N . Y F Y H .	850
6	mouse_E3αII	S R A E Q S K A E E	A Q R K L K R E N K	E D T A L P P P A L	P P F C P L F A S L	V N I L Q C D V M L	898
4	human_E3αII	S R A E Q S K A E E	A Q R K L K R Q N R	E D T A L P P P V L	P P F C P L F A S L	V N I L Q S D V M L	898
15	mouse_E3αI	S K T Q H S K A E H	M Q K K R R K Q E N	K D E A L P P P P P	P E F C P A F S K V	V N L L S C D V M	888
2	human_E3αI	S K T Q H S K A E H	M Q K K R R K Q E N	K D E A L P P P P P	P E F C P A F S K V	I N L L N C D I M M	888
	Consensus	S S K A E .	. Q . K . . . Q . .	. D . A L P P P . .	P . F C P . F . . .	V N . L . C D V M	900



Figure 1G

SEQ ID NO:							
6	mouse_E3αII	YI MGTI LQWA	VEHHGSAWSE	SMLQRVLHLI	GMALQEEKHH	LENAVEGHVQ	948
4	human_E3αII	CI MGTI LQWA	VEHNGYAWSE	SMLQRVLHLI	GMALQEEKQH	LENVTEEHVV	948
15	mouse_E3αI	YI LRTI FERA	VDTESNLWTE	GMLQMAFHI L	ALGLLEEKQQ	LQKAPEEEV-	937
2	human_E3αI	YI LRTV FERA	I DTDSNLWTE	GMLQMAFHI L	ALGLLEEKQQ	LQKAPEEEV-	937
	Consensus	YI . . . TI . . . A	V W . E	. MLQ . . . H . .	. . . . L . EEKQ	L . . A . EE . V .	950
6	mouse_E3αII	TFTFTQKI SK	PGDAPHNSPS	I LAMLETQN	APSLEAHKDM	I RWL LKM FNA	998
4	human_E3αII	TFTFTQKI SK	PGEAPKNPS	I LAMLETQN	APYLEVHKDM	I RW LKTFNA	998
15	mouse_E3αI	A FDFYHKASR	LGSSAMNAQN	I QMLLERLKG	I PQLEGQKDM	I TW LQM FDT	987
2	human_E3αI	T FDFYHKASR	LGSSAMNI QM	L - - - LEKLKG	I PQLEGQKDM	I TW LQM FDT	984
	Consensus	TF . F . . K . S .	. G N . .	I . . . LE . L . .	. P . LE . . KDM	I . W L . MF . .	1000
6	mouse_E3αII	I KKI RE - - CS	SSSPVAEAEAG	TI MEESSRDK	DKAERKRKAE	I ARLRREKI M	1046
4	human_E3αI	VKKMRE - - SS	PTSPVAETEG	TI MEESSRDK	DKAERKRKAE	I ARLRREKI M	1046
15	mouse_E3αI	VKRLREKSCL	VVATTSGLEC	I KSEEI THDK	EKAERKRKAE	AARLHRQKI M	1037
2	human_E3αI	VKRLREKSCL	I VATTSGSES	I KND E I THDK	EKAERKRKAE	AARLHRQKI M	1034
	Consensus	VK . . RE . . C .	. . . . . E .	. . . EE . . . DK	. KAERKRKAE	. ARL . R . KI M	1050

Figure 1H

6	mouse_E3αII	AQMSEMQRHF	I DENKELFQQ	TLELDTSASA	TL--DSSPPV	SDAALTALGP	1094
4	human_E3αII	AQMSEMQRHF	I DENKELFQQ	TLELDASTA	VL--DHSPVA	SDMTLTALGP	1094
15	mouse_E3αI	AQMSALQKNF	I ETHKLMYDN	TSEVTGKEDS	IMEESTSAV	SEASRIALGP	1087
2	human_E3αI	AQMSALQKNF	I ETHKLMYDN	TSEMPGKEDS	IMEESTPAV	SDYSRIALGP	1084
	Consensus	AQMS..Q..F	I...K....	T.E.....	....S.P.V	SD....ALGP	1100
6	mouse_E3αII	AQTQVPEPRQ	FVTCILCQEE	QEVTVGSRAM	VLAAFVQRST	VLSKDRTKTI	1144
4	human_E3αII	TQTQVPEQRQ	FVTCILCQEE	QEVKVESRAM	VLAAFVQRST	VLSKNRSKFI	1144
15	mouse_E3αI	KRGPAVTEKE	VLTCLCQEE	QEVKLENNAM	VLSACVQKST	ALTQHRGKPV	1137
2	human_E3α	KRGPSVTEKE	VLTCLCQEE	QEVKIENNAM	VLSACVQKST	ALTQHRGKPI	1134
	Consensus	.....	..TCILCQEE	QEVK.E..AM	VL.A.VQ.ST	.L...R.K.I	1150
6	mouse_E3αII	AD-PEKYDPL	FMHPDLSCGT	HTGSCGHVMH	AHCWQRYFDS	VQAKEQRRQQ	1193
4	human_E3αII	QD-PEKYDPL	FMHPDLSCGT	HTSSCGHI	MH AHCWQRYFDS	VQAKEQRRQQ	1193
15	mouse_E3αI	DHLGETLDPL	FMDPDLAHT	YTGSCGHVMH	AVCWQKYFEA	VQ---LSSQQ	1184
2	human_E3αI	ELSGEALDPL	FMDPDLAYGT	YTGSCGHVMH	AVCWQKYFEA	VQ---LSSQQ	1181
	Consensus	....E..DPL	FM.PDL..GT	.TGSGGHVMH	A.CWQ.YF..	VQ.....QQ	1200

Figure 1I

6	mouse_E3αII	RLRLHTSYDV	ENGFLCPLC	ECLSNVTIPL	L-LPPRSILS	RRLN-FSDQP	1241
4	human_E3αII	RLRLHTSYDV	ENGFLCPLC	ECLSNVTIPL	L-LPPRNIFN	NRLN-FSDQP	1241
15	mouse_E3αI	RIHVDL-FDL	ESGEYLCPLC	KSLCNTVIPI	IPLQPQKINS	ENAEALAQLL	1233
2	human_E3αI	RIHVDL-FDL	ESGEYLCPLC	KSLCNTVIPI	IPLQPQKINS	ENADALAQLL	1230
	Consensus	R.....D.	E.GE.LCPLC	..L.NTVIP.	..L.P..I.S	.....	1250
6	mouse_E3αII	DLAQWTRAVT	QQIKVVQMLR	RKHNAA-DTS	SSETEAMNI	IPIPEGFRPD	1290
4	human_E3αII	NLTQWRTIS	QQIKALQFLR	KEESTP-NNA	STKSENVD	LQLPEGFRPD	1290
15	mouse_E3αI	TLARWQTVL	ARISGYNIKH	AKGEAPAVPV	LFNQGMGDS	FEFHSILSFG	1283
2	human_E3αI	TLARWQTVL	ARISGYNIKH	AKGENP-IPI	FFNQGMGDS	LEFHSILSFG	1279
	Consensus	.LA.W.TV.	..I.....	.K...P-...	.....	.....	1300
6	mouse_E3αII	FYPRNPYSDS	IKEMLTTFGT	AAYKVGLKVH	PNEGDPVPPI	LCWGTCAVTI	1340
4	human_E3αII	FRPKIPYSES	IKEMLTTFGT	ATYKVGLKVH	PNEEDPRVPI	MCWGSCAYTI	1340
15	mouse_E3αI	VQSSVKYSNS	IKEMWILFAT	TIYRIGLKVP	PDELDPRVPM	MTW5TCAFTI	1333
2	human_E3αI	VESSI KYSNS	IKEMWILFAT	TIYRIGLKVP	PDERDPRVPM	LTW5TCAFTI	1329
	Consensus	.....YS.S	IKEM...F.T	..Y..GLKV.	P.E.DPRVP.	..W.TCA.TI	1350



Figure 1J

SEQ ID NO:					
6 mouse_E3αII	QSIERILSDE	EKPVFGPLPC	RLDDCLRSLT	RFAAAHWTVA	LLPVVQGHFC 1390
4 human_E3αII	QSIERILSDE	DKPLFGPLPC	RLDDCLRSLT	RFAAAHWTVA	SVSVVQGHFC 1390
15 mouse_E3αI	QAIENLLGDE	GKPLFGALQN	RQHSLKALM	QFAVAQRATC	PQVLIHKHLA 1383
2 human_E3αI	QAIENLLGDE	GKPLFGALQN	RQHNGLKALM	QFAVAQRITC	PQVLIQKHLV 1379
Consensus	Q . IE . . L . DE	. KPLFG . L . .	R L . . L .	. FA . A . . . . .	. . . . . Q . H . . 1400
6 mouse_E3αII	KL FASLVPSD	SYEDLPCILD	IDMFHLLVGL	VLAFPALQCQ	D ---FSGSSL 1437
4 human_E3αII	KL FASLVPNL	SHEELPCILD	IDMFHLLVGL	VLAFPALQCQ	D ---FSGISL 1437
15 mouse_E3αI	RLLSVILPNL	QSENTPGLLS	VDLFHVLVGA	VLAFPSLYWD	DTVLDLQPSPL 1433
2 human_E3αI	RLLSVVL PNI	KSEDTPCLLS	IDLFHVLVGA	VLAFPSLYWD	DPVDLQPSV 1429
Consensus	. L PN .	. . E . . PC . L .	ID . FH . LVG .	VLAFP . L . . .	D SSL 1450
6 mouse_E3αII	ATG--DLHIF	HLVTMAHIVQ	ILLTSCTEEN	---GMDQENP	TGEEELAILS 1482
4 human_E3αII	GTG--DLHIF	HLVTMAHIIQ	ILLTSCTEEN	---GMDQENP	PCEEE SAVLA 1482
15 mouse_E3αI	SSSYNHLYLF	HLITMAHMLQ	ILLTTDTDL S	PGPPLAEGEE	DSEEARCASA 1483
2 human_E3αI	SSSYNHLYLF	HLITMAHMLQ	ILLTVD TGL-	---PLAQVQE	DSEEAHSASS 1475
Consensus	. . . . . L . . F	HL . TMAH . . Q	ILLT . . T . .	--- Q . . .	. . EE 1500

Figure 1K

6	mouse_E3αII	LHKTQHQTG	SALKEAPSGW	HLWRSVRAAI	MPFLKCSAL	FHYLNGVPAP	1532
4	human_E3αII	LYKTLHQYTG	SALKEIPSGW	HLWRSVRAGI	MPFLKCSALF	FHYLNGVPSP	1532
15	mouse_E3αI	FFVEVSQHTD	GLTGCGAPGW	YLWLSLRNGI	TPYLRCALL	FHYLLGVAPP	1533
2	human_E3αI	FFAEISQYTS	GSIGCDIPGW	YLWVSLKNGI	TPYLRCALLF	FHYLLGVTPP	1525
	Consensus	.....QYT.	.....GW	.LW.S.R.GI	.P.L.C.AL	FHYL.GV..P	1550
6	mouse_E3αII	PDLQV-SGTS	HFEHLCNYLS	LPTNLIHLFQ	ENSDIMNSLI	ESWCQNSEVK	1581
4	human_E3αII	PDIQV-PGTS	HFEHLCSYLS	LPNNLICLFQ	ENSEIMNSLI	ESWCRNSEVK	1581
15	mouse_E3αI	EELFANSAEG	EFSALCSYLS	LPTNLFLLFQ	EYWDTIRPLL	QRWCGDPALL	1583
2	human_E3αI	EELHTNSAEG	EYSALCSYLS	LPTNLFLLFQ	EYWDTVRPLL	QRWCADPALL	1575
	Consensus	..L....S....	.F..LCSYLS	LPTNL..LFQ	E..D....L.	..WC.....	1600
6	mouse_E3αII	RYLNGERGAI	SYPRGANKLI	DLPEDYSSLI	NQASNFSCPK	SGGDKSRAPT	1631
4	human_E3αII	RYLEGERDAI	RYPRESNKLI	NLPEDYSSLI	NQASNFSCPK	SGGDKSRAPT	1631
15	mouse_E3αI	KSLKQKSAVV	RYPRKRNSLI	ELPEDYSCLL	NQASHFRCPR	SADDERKHPV	1633
2	human_E3αI	NCLKQKNTVV	RYPRKRNSLI	ELPDDYSCLL	NQASHFRCPR	SADDERKHPV	1625
	Consensus	..L.....	RYPR..N.LI	.LPEDYS.L.	NQAS.F.CP.	S...D.....P.	1650



Figure 1L

6	mouse_E3αII	LCLVCGSLLC	SQSYCCQAEL	EGEDVGACTA	HTYSCGSGAG	I FLRVRECQV	1681
4	human_E3αII	LCLVCGSLLC	SQSYCCQTEL	EGEDVGACTA	HTYSCGSGVG	I FLRVRECQV	1681
15	mouse_E3αI	LCLFCGAILC	SQNI CCQEIV	NGEEVGACVF	HALHCGAGVC	I FLKI RECRV	1683
2	human_E3αI	LCLFCGAILC	SQNI CCQEIV	NGEEVGACI F	HALHCGAGVC	I FLKI RECRV	1675
	Consensus	LCL.CG..LC	SQ..CCQ...	.GE.VGAC..	H...CG.GV.	I FL..REC.V	1700
6	mouse_E3αII	LFLAGKTKGC	FYSPPYLDDY	GETDQGLRRG	NPLHLCQERF	RKI QKLWQQH	1731
4	human_E3αII	LFLAGKTKGC	FYSPPYLDDY	GETDQGLRRG	NPLHLCCKERF	KKI QKLWHQH	1731
15	mouse_E3αI	VLVEGKARGC	AYPAPYLDEY	GETDPGLKRG	NPLHLSRERY	RKLHLVWQQH	1733
2	human_E3αI	VLVEGKARGC	AYPAPYLDEY	GETDPGLKRG	NPLHLSRERY	RKLHLVWQQH	1725
	Consensus	...GK...GC	.Y..PYLD.Y	GETD.GL.RG	NPLHL...ER.	RK....WQQH	1750
6	mouse_E3αII	SITEEIGHAQ	EANQTLVGI D	WQHL			1755
4	human_E3αII	SVTEEIGHAQ	EANQTLVGI D	WQHL			1755
15	mouse_E3αI	CIIEEI ARSQ	ETNQMLFGFN	WQLL			1757
2	human_E3αI	CIIEEI ARSQ	ETNQMLFGFN	WQLL			1749
	Consensus	.I.EEI...Q	E.NQ.L.G..	WQ.L			1774



FIG. 2

Tth Expression Profile of huE3 α -II in Human Tissues

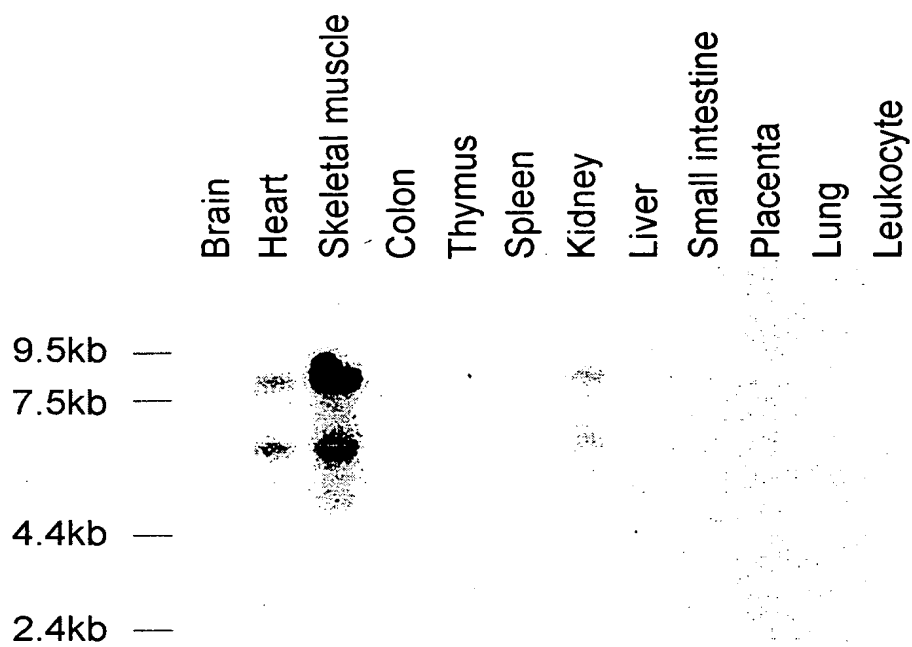


FIG. 3

Tth Expression Profile of huE3 α -I in Human Tissues

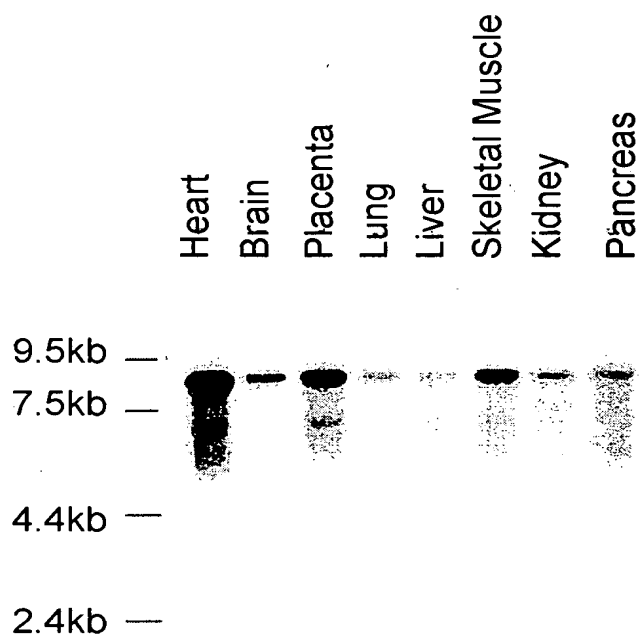


Figure 4
Ubiquitination of Endogenous Proteins

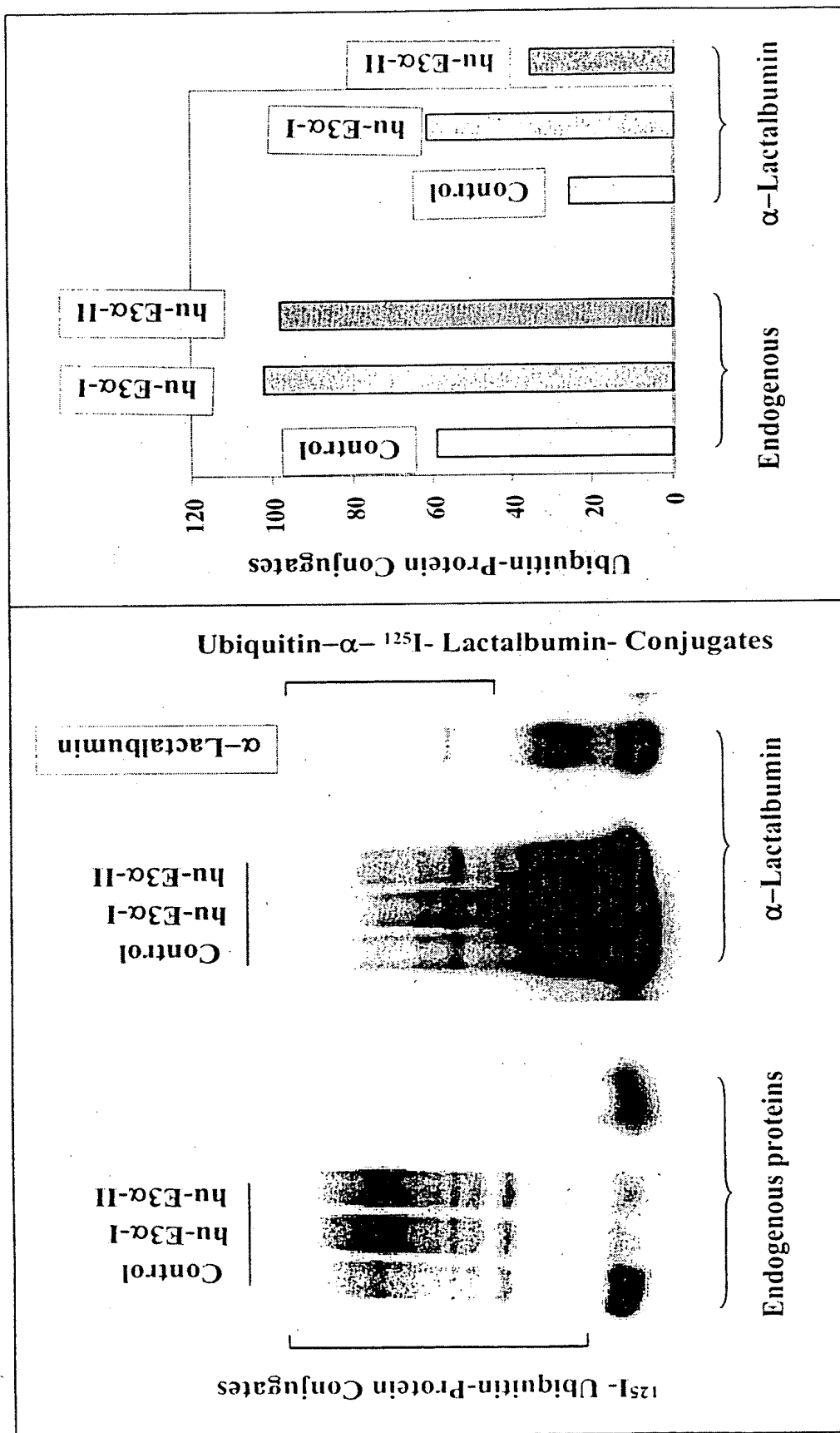


Figure 5
Transfection of Human E3a-I or E3a-II cDNA Stimulates
Ubiquitin Conjugation in Cultured Muscle Cell Lines

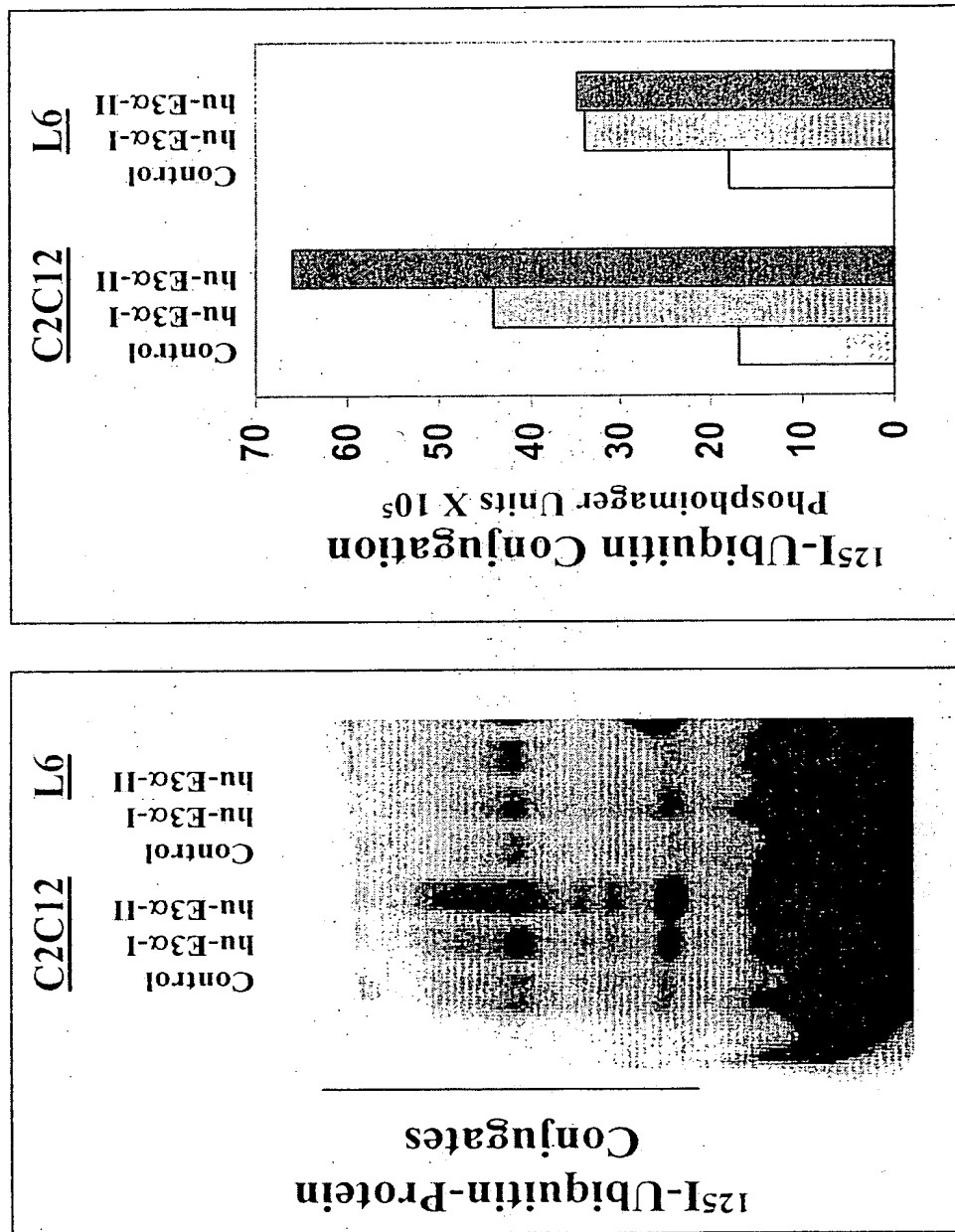


Figure 6

¹²⁵I-Ubiquitin Conjugation to Muscle Proteins and Its Sensitivity to E3 α Inhibitor in Skeletal Muscle Extracts

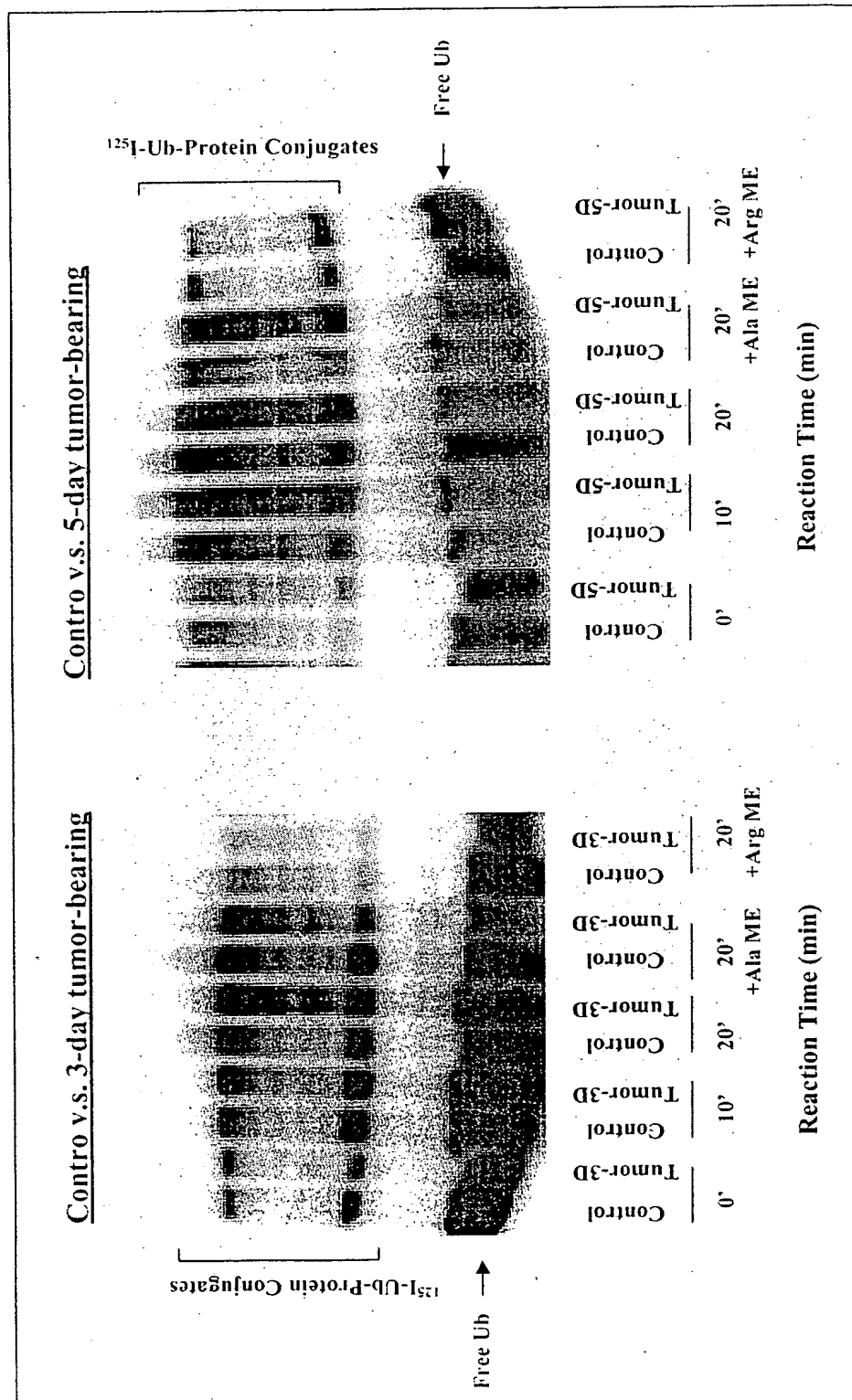


Figure 7
Rates of Ubiquitination of N-end Rule Substrate
 α -Lactalbumin in Skeletal Muscle Extracts

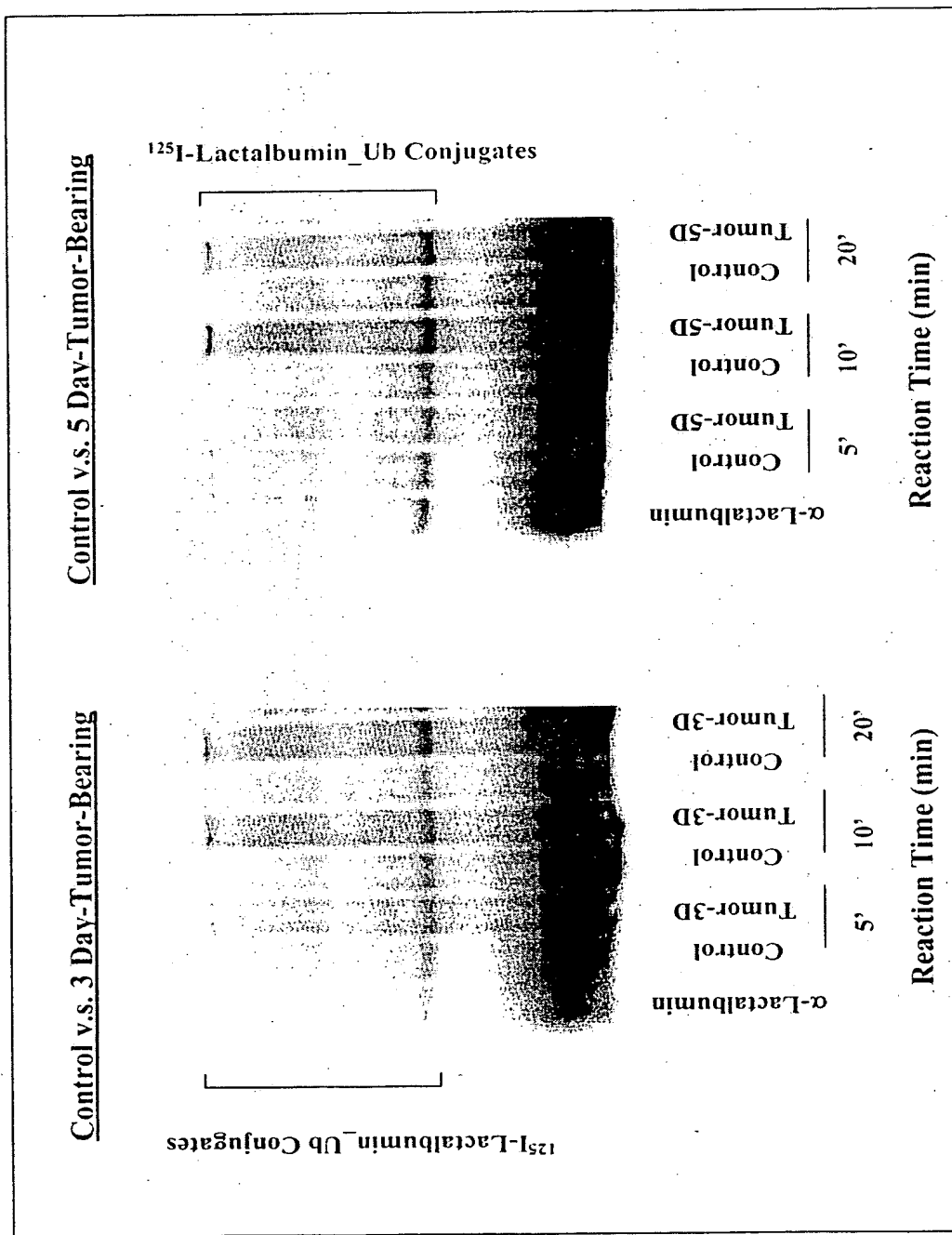


Figure 8

**Northern blot analysis of E3 α -I & E3 α -II expression
in gastrocnemius muscles in YAH-130 experimental cachexia model**

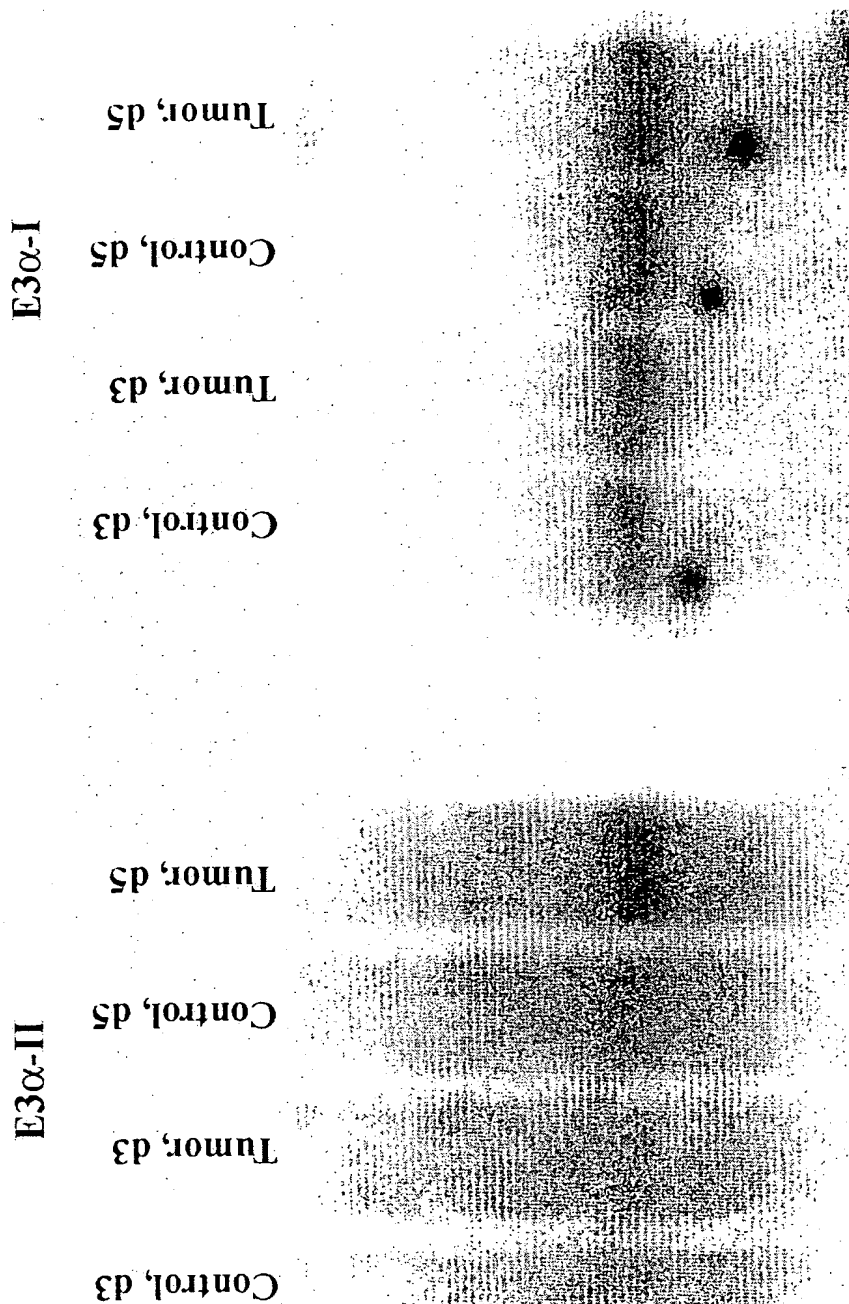


Figure 9

Northern blot analysis of E3 α -I and E3 α -II expression in
 gastrocnemius muscle and cardiac muscle
 in C26 experimental cachexia model

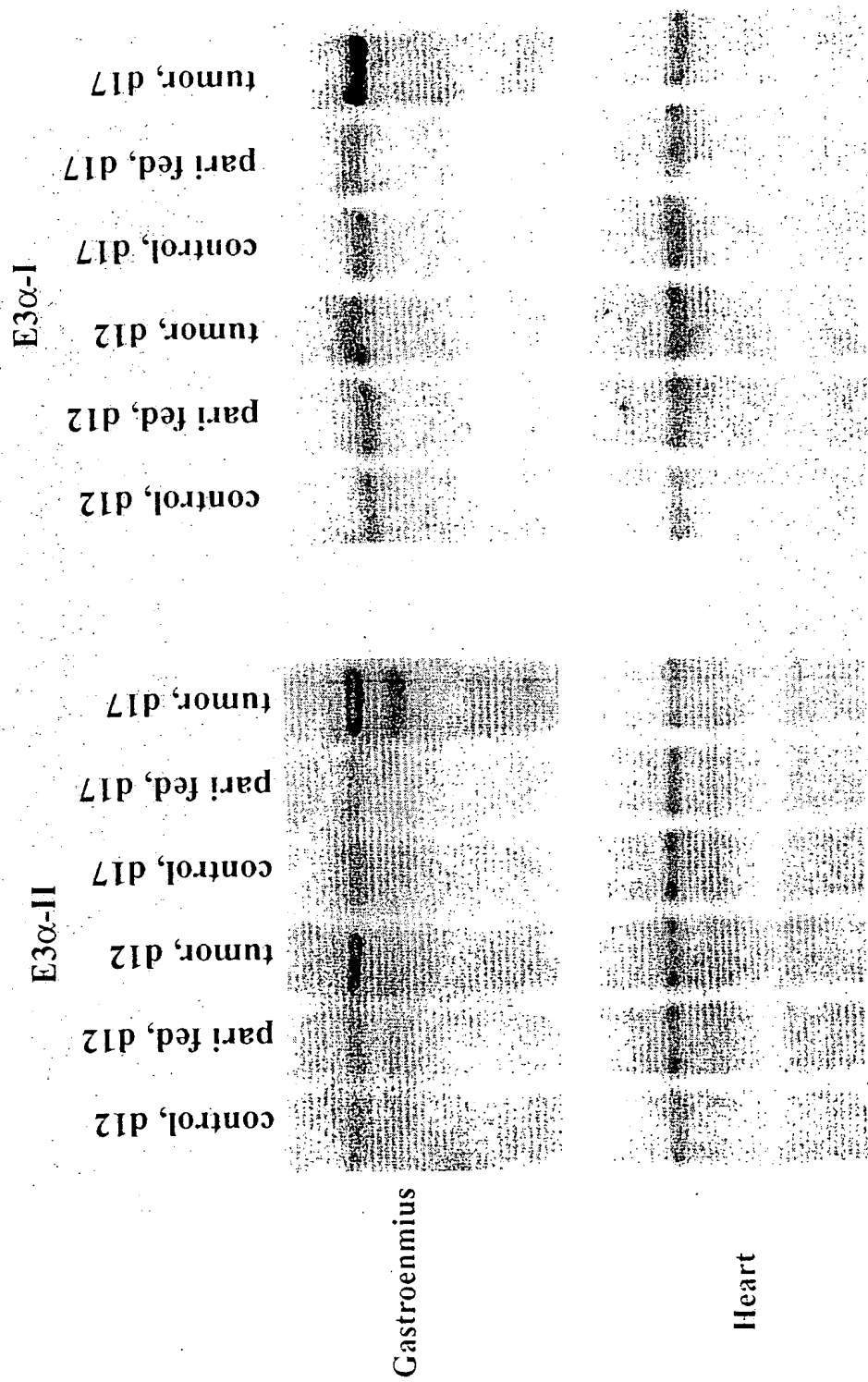


Figure 10
 Proinflammatory cytokines TNF- α and IL-6
 induce E3 α -II Expression in C2C12 myotube culture

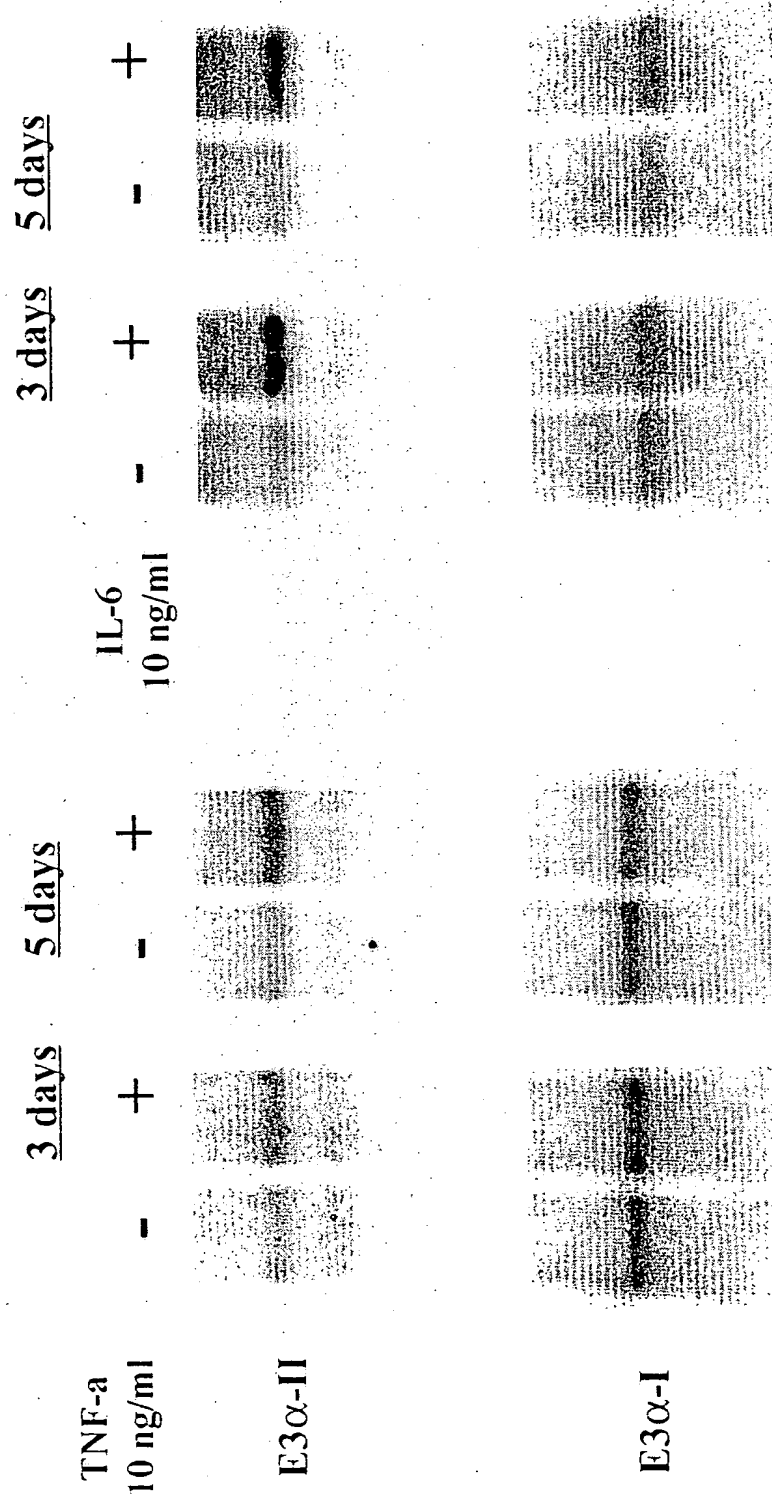


Figure 11
IL-6 Elicits Accelerated Ubiquitination in C2C12 Myotube Cultures

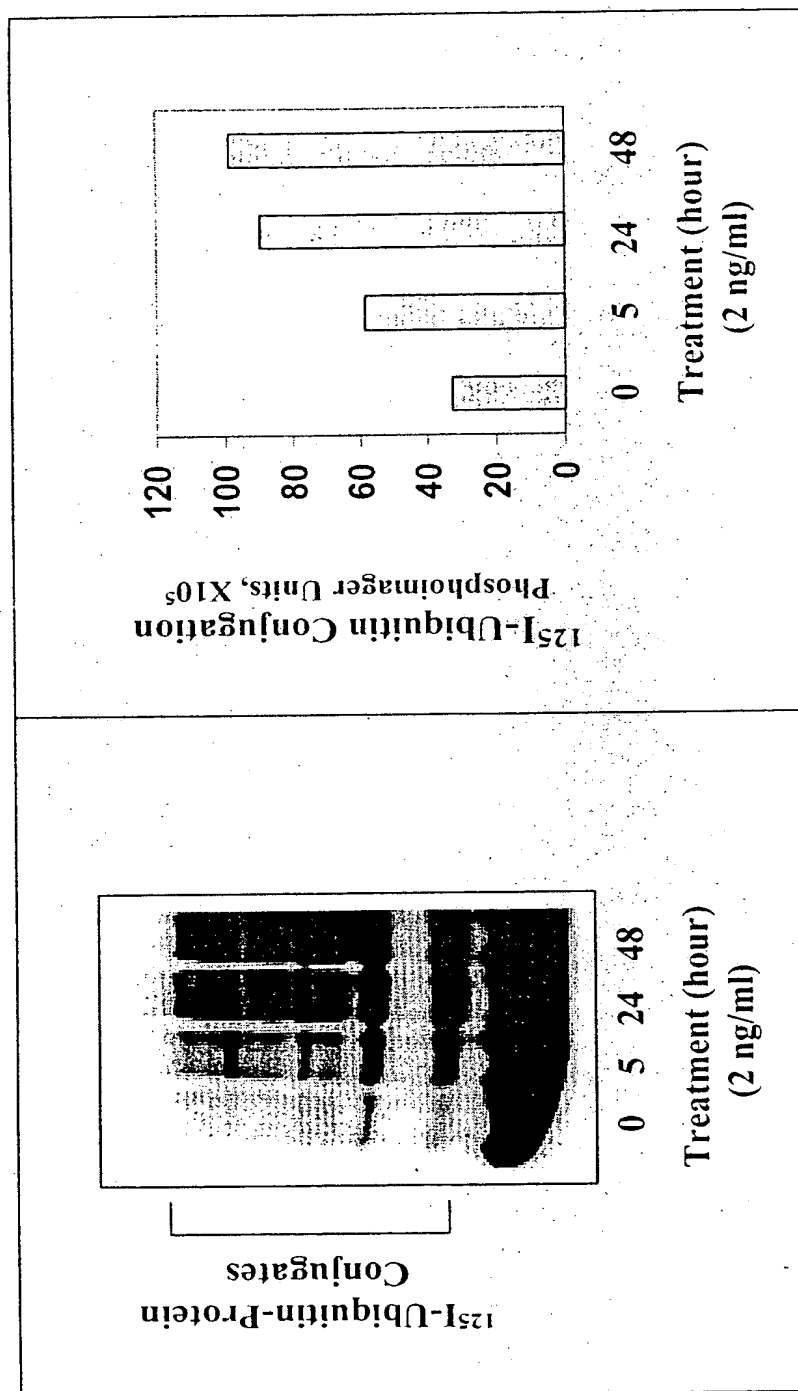


Figure 12
TNF α Elicits Accelerated Ubiquitination in C2C12 Myotube Cultures

